

A Knowledge Sharing Initiative by Medanta

Medanta is the Best Private Hospital in India Newsweek



Testimony to the world-class healthcare it provides, Medanta has been acknowledged as the **best private healthcare provider in India** in the **World's Best Hospitals 2020** survey by Newsweek in partnership with Statista Inc.

Conducted across hospitals in 21 countries, the survey is based on recommendations from medical professionals, results from patient surveys and key medical performance indicators.

“ It is indeed an honour for Medanta to be voted as the best private hospital in the country by a body of medical professionals and patients. Since this survey has been conducted independently, it highlights the reputation Medanta has built over the years. We stay committed to providing patients with the best standards of clinical care, medial infrastructure and advanced technology. We will continue to focus on delivering holistic and affordable healthcare based on excellence, compassion, collaboration, learning and innovation. ”



Dr Naresh Trehan
Chairman and
Managing Director
Medanta



Best Clinical Expertise

World-class Infrastructure

Cutting-edge Technology

9 Locations | Over 30 Super Specialties

Kudos

Medanta Treats Aneurysm <2mm Size Pioneers Use of Mini Flow Diverter

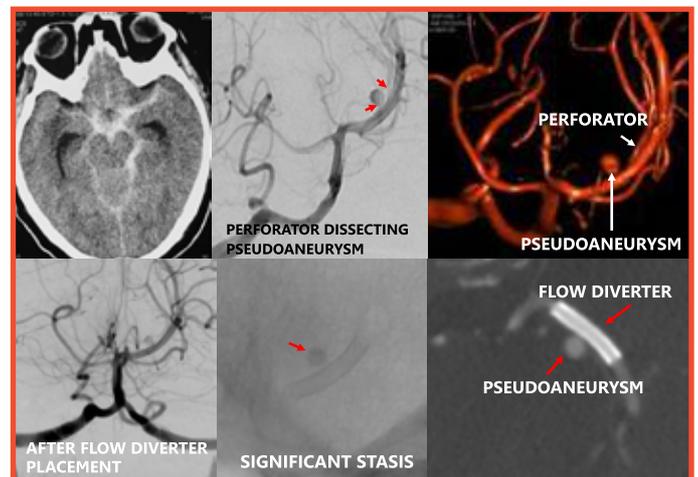
Medanta - Gurugram became the first hospital in India to treat aneurysm not amenable to routine surgical clipping and endovascular coiling by using mini flow diverter, a new breakthrough device used to treat very small (<2mm) distal brain aneurysms. The procedure was done successfully using minimally invasive endovascular technique without opening the skull. Until now, treating such aneurysms using surgical clipping and available endovascular devices was a challenge with relatively higher risk.

Case Study

A 51-year-old female, known case of hypertension presented in emergency on June 11, 2020 with complaint of severe headache associated with nausea and vomiting for five days. Her non-contrast computed tomography head showed acute subarachnoid hemorrhage. She was conscious with slightly dull response on examination. Her Glasgow Coma Scale was 15. Digital subtraction angiography was performed which revealed very small dissecting pseudoaneurysm of posterior cerebral artery perforator on the left side, not amenable to routine endovascular coiling and surgical clipping. The patient was advised to undergo endovascular flow diverter placement procedure which would redirect the flow away from the aneurysm and subsequently initiate thrombosis of aneurysm and occlude it in follow up. Small caliber posterior cerebral artery, mini flow diverter (2.25x10mm) was successfully

deployed across the perforator pseudoaneurysm. There was significant stasis achieved on delayed angiographic run. Patient was discharged in stable condition after seven days without any neurological deficit (modified Rankin Scale (mRS) score of 0).

The Neurointervention team at the Medanta Institute of Neurosciences has immense experience in treating aneurysms using flow diverters. The team has the experience of successfully treating over 200 aneurysms.



Biplane Lab @ Medanta

TechByte

Flow Diverter

Flow diverter is a stent-like device used to treat complex aneurysms. The device is regularly used to treat intracranial aneurysms which are difficult to treat with routine endovascular coiling. Once deployed across the aneurysm neck, a flow diverter disrupts the blood flow from the parent artery into the aneurysm which then induces thrombosis within the aneurysm, resultantly decreasing the subsequent re-rupture. Over time, neointimal overgrowth covers the flow diverter, reconstructing the parent artery and eliminating the aneurysm/parent vessel interface.

Traditionally, brain aneurysms have been treated using endovascular methods such as balloon assisted and stent assisted coiling. But studies have shown their less than expected efficacy given their high rate of recanalization.

Efficacy and Safety

Flow diverter treatment has high cure rate with reasonably low complication rate. Safety and efficacy of flow diverters have been well described in literature.

Procedure

First the microcatheter is navigated across the aneurysm in the parent artery. Flow diverter is then deployed via microcatheter across the neck of the aneurysm in the parent blood vessel where the aneurysm is located. Almost immediately, blood flow to the aneurysm is reduced resulting in stasis thereby decreasing the risk of rupture. Complete occlusion of aneurysm occurs between three and six months following the procedure.

Advances in Flow Diverter

The latest innovation in this space is small size flow diverters which are now enabling treatment of aneurysms located in distal smaller size calibre vessels. However, they are deployed through large-size microcatheters which sometimes become difficult to navigate into the distal smaller vessels. The latest, smaller version of the flow diverter device addresses this challenge as it can be deployed with the lowest profile 0.017" microcatheter. The advantage of the device is the easy trackability of microcatheter through the distal smaller vessels (1.5-3.5mm calibre), smooth and easy deployment, and full radiopacity with 90% resheathability.

medanta.org/dr-gaurav-goel/

In Focus

Medanta's Expertise Anatomical and Reverse Shoulder Replacement

Osteo-arthritis of the shoulder joint is a progressive disorder characterized by damage to the articular cartilage of humeral head and/or glenoid. It can lead to debilitating functional limitations, compromising the individual's quality of life. Shoulder Replacement is the only solution for such patients.

Reverse Shoulder Replacement has emerged as the preferred technique for dealing with longstanding cases of arthritis/ tendon damage/ fractures or complications arising out of previous treatments or neglect. Reverse shoulder arthroplasty has better outcomes than conventional anatomical total shoulder replacement in these complex situations. More sophisticated implants, designs, techniques, coupled with better understanding of the shoulder biomechanics has contributed to the popularity of the procedure. Reverse Shoulder Replacement is designed in such a way that it does not need the stabilizing effect of rotator cuff tendons which is essential for anatomical shoulder replacement to function.

Reverse Shoulder Arthroplasty has proven to be the procedure of choice in the following conditions:

- Arthritis (osteoarthritis, rheumatoid arthritis, cuff tear arthropathy, post-traumatic)
- Irreparable rotator cuff tears
- Comminuted fractures in the elderly
- Trauma sequelae (mal-unions, non-unions, fracture-dislocations of proximal humerus)
- Failure of previous fixation
- Failure of previous arthroplasty
- Tumors

The Medanta Institute of Musculoskeletal Disorders and Orthopedics has a dedicated Shoulder and Upper Limb Unit which provides world-class care in arthroscopy, joint replacements and fractures of the upper limb. The team has an experience of over 3,500 shoulder surgeries and over 200 shoulder and elbow replacement surgeries.

Case Study

A 65-year-old male reported to Medanta with two-year history of right side shoulder pain which had progressed over time and increased in intensity. He had difficulty moving his right shoulder and performing activities of daily living. He had been misdiagnosed as frozen shoulder and managed with analgesics and intra articular steroid injections elsewhere. The patient was experiencing pain even at rest. Loading of the joint was also painful. He was a known hypertensive and had undergone knee replacement in the past.

The patient presented with the findings of restricted range of motion with internal rotation contracture of 30 degrees which was limiting him from even accessing his back pocket. External rotation was not possible due to internal rotation contracture, abduction was 70 degrees, and forward flexion was 100 degrees. The strength of muscles could not be tested as loading the arm was extremely painful.

X-rays revealed primary osteoarthritis of the shoulder with Walch B2 biconcave glenoid, erosion of the posterior glenoid with head of the humerus locked posteriorly. In this case, a conventional anatomical replacement would have failed because of deficiency in the socket (glenoid) of the shoulder.



True AP view of shoulder showing glenohumeral arthritis



Axillary view of the shoulder showing posteriorly locked humeral head (Biconcave glenoid)

CT scan was done to measure the exact bone loss on axial cuts, and get an estimate of wedge bone graft required to compensate for the glenoid defect to correct the native glenoid version.



Axial CT cut showing arthritis, bone loss of glenoid

Pre-anaesthetic checkup of the patient was done and Complex Reverse Shoulder Arthroplasty was planned. The surgery was performed with restoration of the glenoid defect using a wedge bone graft from the humeral head.



True AP view post-operative



Axillary view post-operative

Range of motion exercises were started on the first post-operative day. The aim of Reverse Shoulder Arthroplasty is to restore painless functional joint which was achieved in this case despite the surgery being technically complex and challenging. 1.5 years post-op, the patient is doing well with stable, strong and pain-free shoulder.



Elevation



Internal Rotation



External Rotation

Images showing functional range of motion 2 months following surgery

Medanta@Work

Comprehensive Prostate Cancer Care @ Medanta



SEPTEMBER
PROSTATE CANCER
— AWARENESS MONTH —

Globally, prostate cancer is the second most frequently diagnosed cancer and the fifth most common cause of cancer death among men. Its incidence has particularly increased after 1991 with advent of prostate specific antigen (PSA) screening in men over 50 years of age. Most cases present after age of 60 years. Risk factors include older age, family history, race (caucasians).

Prostate cancer rarely causes symptoms at an early stage. The presence of symptoms suggests locally advanced or metastatic disease. Common manifestations of locally advanced prostate cancer include obstructive urinary symptoms, ureteral obstruction causing renal failure. Manifestations of metastatic disease include bone pain, pathologic fractures, anemia, and lower extremity edema.

Timely detection of prostate cancer and its effective treatment leads to excellent outcomes and survival.

Suspicion of prostate cancer arises when men present with above mentioned symptoms/ raised PSA levels/ abnormal digital rectal examination. Confirmation of diagnosis is done by TRUS guided prostate biopsy. Newer modalities of MR-fusion biopsies are also available for highly suspected prostate cancers with negative biopsies or tumors in difficult to access locations. After diagnosis, staging is done via PSMA PET scan/bone scan to decide for options of treatment.

There are multiple treatment modalities depending on stage, grade, PSA levels and life expectancy of patient. After staging, prostate cancer is classified into localized, locally advanced and metastatic disease.

Localized low risk prostate cancer can be managed by active surveillance or watchful waiting with the intent for

regular monitoring and active intervention if required. These patients should also be offered definitive local therapies with curative intent (surgery and radiotherapy).

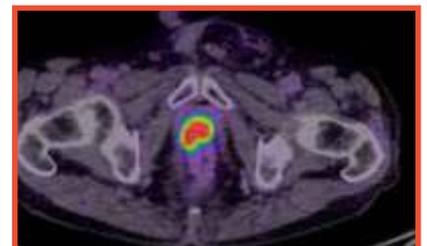
Robot assisted radical prostatectomy is now considered the gold standard treatment for localized as well as highly selective locally advanced disease patients. Robotic prostatectomy is associated with a significantly lower transfusion rate and shorter hospital stay compared to open radical prostatectomy.

Metastatic prostate cancer patients can be treated with hormonal therapy, chemotherapy or surgical castration. These methods have been found to prolong cancer specific survival and improve quality of life. These patients also require bone strengthening drugs to reduce skeletal related events as bone metastases is the earliest to manifest in these patients. Newer modalities include immunotherapy and radiopharmaceuticals.

Various effective treatment modalities have emerged which have led to cure in early stage disease, improvement in overall survival and quality of life in late stage diseases. Medanta is at the forefront of diagnosing and treating prostate cancer with an experienced team of doctors supported by cutting-edge technology.

Case Study

A 63-year-old male patient was referred to Medanta for elevated PSA and a negative prostate biopsy. His PSA was 11.3 but his ultrasound guided prostate biopsy did not reveal any cancer tissue. Dynamic MRI of prostate was done which showed a suspicious lesion in the anterior



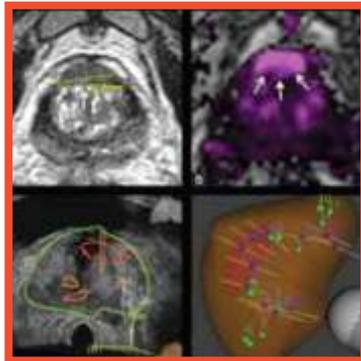
Dynamic MRI detecting prostate cancer

part of the prostate, a location not easy to target with just an ultrasound guided biopsy. State-of-the-art 3D Artemis semi-robotic prostate fusion biopsy system was used to precisely target the suspicious part of the gland. The report came positive with high-risk prostate cancer.

PSMA PET CT scan was done for distant staging. The patient was offered curative treatment options in the form of Robot Assisted Radical Prostatectomy (RARP) and Radical Radiotherapy. He opted for RARP.



3D Artemis semi-robotic prostate fusion biopsy system



Anteriorly placed prostate cancer targeted with fusion biopsy

The minimally invasive surgery was done using the DaVinci robotic system. The patient was very comfortable post surgery and was able to get out of bed, sit on a chair and have food the same evening. He was discharged within 48 hours of surgery. Within three months,



3T Dynamic MRI

he was fully continent and actively participating in the penile rehabilitation program for faster recovery of erectile function. The patient is cancer-free one year post-surgery and enjoying healthy life.

medanta.org/dr-feroz-amir-zafar/

For **EMERGENCY** DIAL ☎ **1068**

Medanta - Gurugram

Sector - 38, Gurugram, Haryana - 122 001 | Tel: +91 124 4141 414 | Fax: +91 124 4834 111
info@medanta.org

Medanta - Lucknow

Sector - A, Pocket - 1, Sushant Golf City,
Amar Shaheed Path, Lucknow 226030 | Tel: +91 522 4505 050

Medanta - Ranchi

P.O. Irba, P.S. Ormanjhi, Ranchi - 835 217, Jharkhand
Tel: +91 651 7123 100

Medanta - Indore

Plot No. 8, PU4, Scheme No. 54, Vijaynagar Square,
AB Road, Indore, MP | Tel: +91 731 4747 000
medanta.org/dr-feroz-amir-zafar/

Medanta - S.N. Super Speciality Hospital

Nathanwali, Hanumangarh-Suratgarh,
Bypass, Sri Ganganagar
Tel: +91 154 2970360 / 460 / 660 / 760

Medanta - Mediclinic Lucknow

B - 25, Ashok Marg, Sikanderbagh Chauraha,
Lucknow 226001, U.P.
Tel: +91 99100 88800, +91 522 4257 900
mediclinic.lucknow@medanta.org

Medanta - Mediclinic

E - 18, Defence Colony, New Delhi - 110 024
Tel: +91 11 4411 4411
mediclinic@medanta.org

Medanta - Mediclinic Cybercity

UG 15/16, DLF Building 10 C, , DLF Cyber City,
Phase II, Gurugram 122 002
Tel: +91 124 4141 472
mediclinic.cybercity@medanta.org